

POSITIONS AND AREAS OF SUN SPOTS—Continued

Date	East- ern stand- ard time	Mt. Wilson group No.	Heliographic			Area		Total area for each day	Observatory
			Diff. in longi- tude	Longi- tude	Latitu- de	Spot	Group		
Nov. 17...	h. m. 11 5	5645	-84.0	234.7	-18.5	291			U. S. Naval.
		5641	-37.5	281.2	+20.0	97			
		5644	-27.0	291.7	-18.5		48		
		5640	-22.0	296.7	-22.0		97		
		5637	+4.5	323.2	+9.5		73		
		5643	+31.0	349.7	-22.0		48		
		5632	+48.0	6.7	-15.5		388		
		5631	+51.0	9.7	+22.0	194			
		5633	+80.0	38.7	+11.0	97		1,333	
Nov. 18...	11 26	5645	-69.0	236.4	-18.5	291			Do.
		5641	-45.0	290.4	+20.0	73			
		5644	-13.5	291.9	+18.5		145		
		5640	-9.0	296.4	-24.0		73		
		5637	+19.5	324.9	+10.5		73		
		5643	+44.0	349.4	-21.0		36		
		5632	+62.0	7.4	-17.0		291		
		5631	+63.0	8.4	+21.0	194		1,176	
Nov. 19...	11 24	5645	-56.0	236.2	-18.0	388			Mt. Wilson.
		5641	-31.5	260.7	+21.0	61			
		5644	+1.0	293.2	-18.5		145		
		5640	+3.0	295.2	-22.0		36		
		5637	+33.0	325.2	+11.0		97		
		5643	+59.0	351.2	-21.0		36		
		5632	+77.0	9.2	-17.0	291			
		5631	+78.0	10.2	+22.0	170		1,224	
Nov. 20...	11 18	5647	-76.0	203.1	+6.0	24			U. S. Naval.
		5645	-42.0	237.1	-19.0	242			
		5641	-18.5	260.6	+21.0	61			
		5644	+13.5	292.6	-17.5	73			
		5637	+44.0	323.1	+10.5		24		
		5646	+61.0	340.1	-20.0	6		430	
Nov. 21...	11 47	5650	-71.0	194.6	-26.0	12			Mt. Wilson.
		5647	-63.0	202.6	+7.0	24			
		5649	-51.0	214.6	-8.0	12			
		5645	-29.5	236.1	-19.0	339			
		5641	-4.0	261.6	+22.0		97		
		5644	+31.0	296.6	-15.0	61		545	
Nov. 22...	11 4	5654	-80.0	172.8	+10.0		12		U. S. Naval.
		5653	-63.0	189.8	+12.0		97		
		5647	-50.0	202.8	+6.0	36			
		5646	-16.0	230.8	-19.0	291			
		5641	+8.5	261.3	+19.5	45			
		5644	+42.0	294.8	-14.0	24		508	
Nov. 23...	11 4	5654	-66.0	173.7	+9.0	12			Do.
		5653	-50.0	189.7	+13.0		24		
		5647	-36.0	203.7	+7.0	12			
		5655	-14.5	225.2	+18.0		12		
		5645	-3.5	235.2	-19.5	242			
		5641	+20.5	260.2	+20.0	48			
		5646	+29.0	268.7	+8.0	6		356	
Nov. 24...	11 6	5653	-38.0	188.5	+13.0		73		Do.
		5647	-22.5	204.0	+7.0	12			
		5645	+10.0	236.5	-19.0	242			
		5641	+33.5	260.0	+20.0	48		375	
Nov. 25...	10 58	5653	-27.0	186.3	+15.0	12			Mt. Wilson.
		5657	-15.0	198.3	-12.0	6			
		5647	-8.0	205.3	+7.5	12			
		5656	+11.0	224.3	+10.0	24			
		5645	+23.0	236.3	-18.0	218			
		5641	+48.0	261.3	+21.0	36		308	
Nov. 26...	11 44	5654	-22.5	177.2	+10.5		36		Do.
		5660	-8.5	191.2	+7.0		61		
		5653	-6.0	193.7	+13.0		24		
		5659	+25.0	224.7	+18.5		36		
		5656	+25.5	225.2	+9.5		97		

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Nov. 26...	h. m. 11 44	5645	+36.0	235.7	-18.0	218			Mt. Wilson.
		5653	+58.0	257.7	+30.0	24			
		5641	+60.0	259.7	+20.5	36		532	
Nov. 27...	11 23	5661	-15.0	171.8	-17.0		36		Do.
		5660	+5.0	191.8	+7.0		48		
		5658	+37.5	224.3	+9.5		194		
		5659	+39.0	228.8	+19.0		145		
		5645	+49.5	236.3	-18.0	218		641	
Nov. 28...	10 58	5664	-79.5	94.3	-9.0		24		Do.
		5663	-70.0	103.8	+12.0		12		
		5661	-2.5	171.3	-17.5		16		
		5660	+17.0	190.8	+7.0	16			
		5655	+51.0	224.8	+10.0		339		
		5659	+51.0	224.8	+19.0		145		
		5645	+62.0	235.8	-18.5	218			
		5662	+85.0	258.8	-24.5		97	867	
Nov. 29...	11 30	5664	-65.0	95.3	-9.5	36			U. S. Naval.
		5666	-14.5	145.8	-10.0		48		
		5665	+4.0	164.3	-17.0		24		
		5668	+64.0	224.3	+9.5		194		
		5659	+67.0	227.3	+19.0		73		
		5645	+75.0	235.3	-18.0		218	593	
Nov. 30...	11 4	5664	-50.0	97.4	-10.0	36			Do.
		5668	-2.5	144.9	-9.5	36			
		5656	+78.0	225.4	+9.0	97			
		5659	+79.0	226.4	+19.0		48	217	

Mean daily area for 30 days, = 903.

PROVISIONAL SUNSPOT RELATIVE NUMBERS,
NOVEMBER 1937

[Dependent alone on observations at Zurich and its station at Arosa]

[Furnished through the courtesy of Prof. W. Brunner, Eidgen. Sternwarte, Zurich, Switzerland]

November 1937	Relative numbers	November 1937	Relative numbers	November 1937	Relative numbers
1	104	11	79	21	60
2		12	83	22	
3	aa 103	13	ab 100	23	a 58
4	67	14	106	24	
5	Wc 68	15	74	25	Mc
6		16	69	26	Mc 70
7	d 34	17	Ec	27	96
8	d 47	18	d 90	28	64
9	Mc	19		29	68
10	Ec	20	82	30	47

Mean, 22 days = 73.5.

a = Passage of an average-sized group through the central meridian.
 b = Passage of a large group or spot through the central meridian.
 c = New formation of a group developing into a middle-sized or large center of activity;
 E, on the eastern part of the sun's disk; W, on the western part; M, in the central-circle zone.
 d = Entrance of a large or average-sized center of activity on the east limb.

AEROLOGICAL OBSERVATIONS

[Aerological Division, D. M. LITTLE in Charge]

By LOYD A. STEVENS